

### PROPOSED FULL DEPTH PAVEMENT - BUSWAY

SURFACE:

**SUBBASE:** 

1 1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER

2 1/4" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 2 1/4" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

4 1/2" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)

**BASE:** 

4" DENSE GRADED CRUSHED STONE OVER

8" GRAVEL BORROW, TYPE B

#### PROPOSED CEMENT CONCRETE PAVEMENT - BUSWAY

10" CEMENT CONCRETE PAVEMENT (5000 PSI) SURFACE: **SUBBASE:** 4" DENSE GRADED CRUSHED STONE OVER

8" GRAVEL BORROW, TYPE B

# PROPOSED MILL & OVERLAY

PAVEMENT MILLING:

PAVEMENT OVERLAY: 1 1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

#### PROPOSED CEMENT CONCRETE WALK/ WHEELCHAIR RAMP

4" CEMENT CONCRETE PAVEMENT SURFACE: **FOUNDATION:** 8" GRAVEL BORROW, TYPE B

#### PROPOSED HMA PARKING LOT

SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER

2 1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

**FOUNDATION:** 8" GRAVEL BORROW, TYPE B

#### PROPOSED FULL DEPTH SHARED-USE PATH PAVEMENT

SURFACE: 1 1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

2 1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) **INTERMEDIATE:** 

8" (MIN) GRAVEL BORROW, TYPE B **SUBBASE:** 

# PROPOSED FULL DEPTH DRIVEWAY

SURFACE: **6" CEMENT CONCRETE PAVEMENT FOUNDATION:** 8" (MIN) GRAVEL BORROW, TYPE B

# PROPOSED BRT PLATFORM

SURFACE: 8" CEMENT CONCRETE PAVEMENT

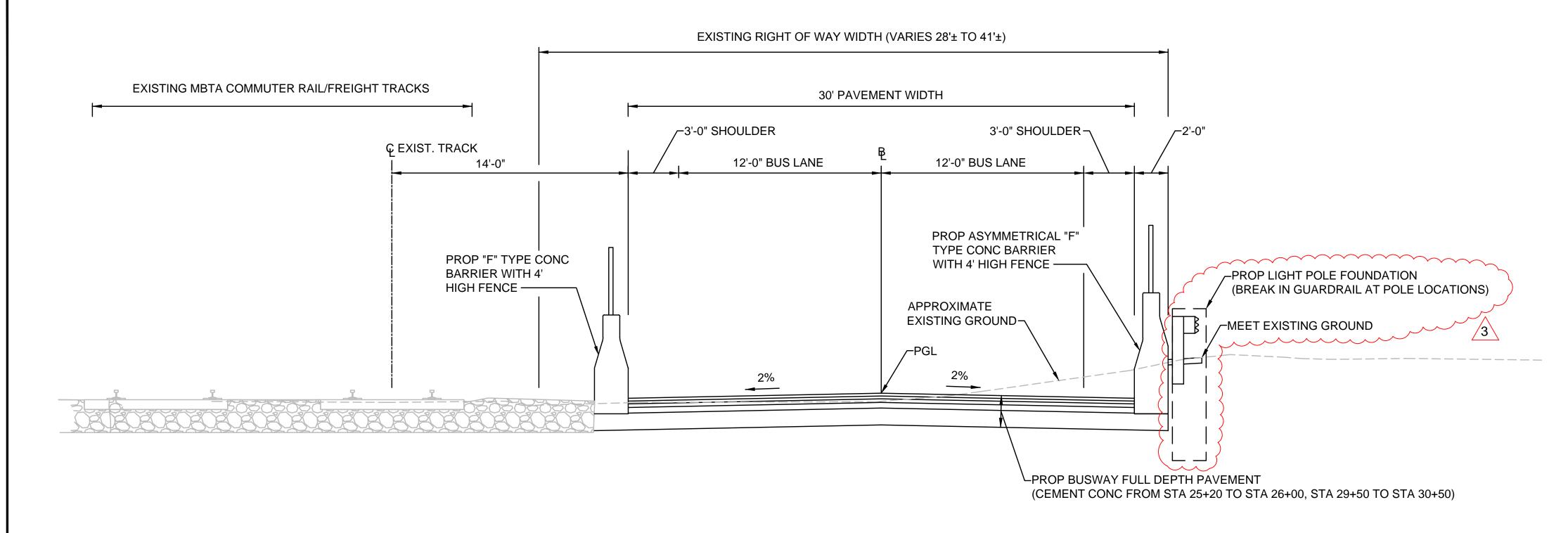
**FOUNDATION:** 8" GRAVEL BORROW, TYPE B

# PROPOSED GRANITE CURB

GRANITE CURB TO HAVE 6" REVEAL (TYPICAL) EXCEPT 11" REVEAL AT BRT PLATFORMS AT BOX DISTRICT & CHELSEA CENTER AND 8" REVEAL AT BRT PLATFORMS AT EASTERN AVE & MYSTIC MALL.

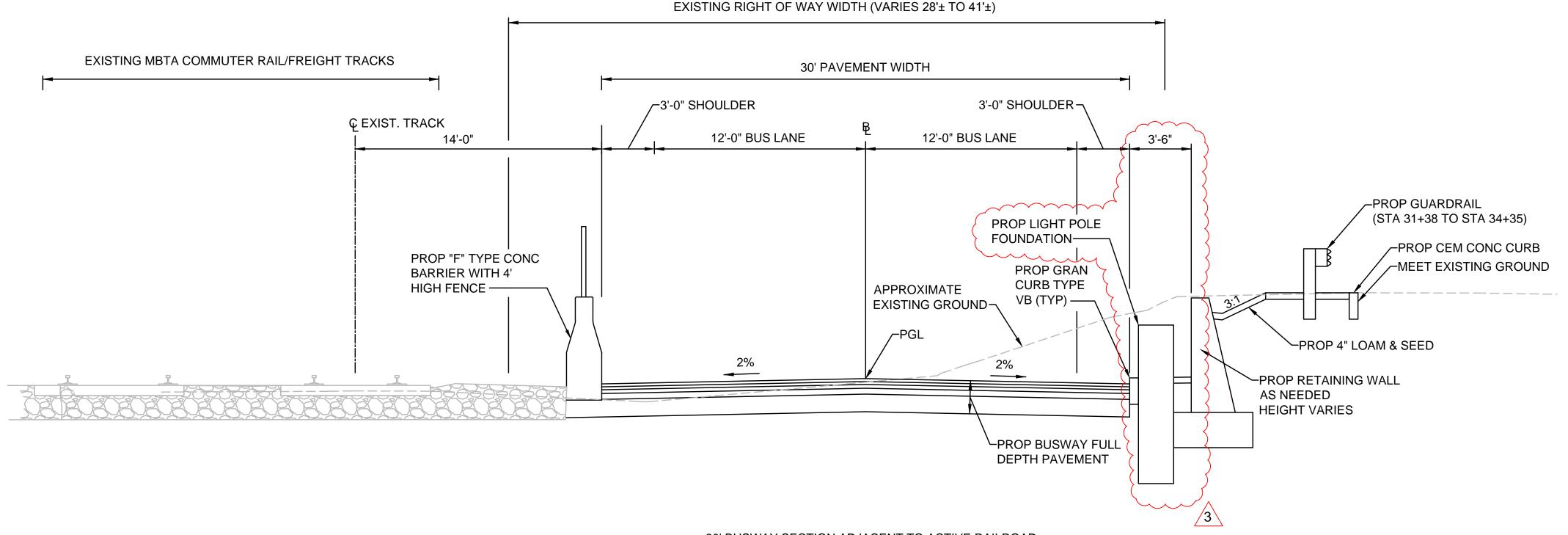
# **NOTES:**

- 1. ALL SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) AND UPPERMOST INTERMEDIATE COURSE - 19.0 (SIC 19.0) SHALL BE LATEX MODIFIED AND/OR SHALL MEET A MINIMUM PG **GRADING OF 70-22.**
- 2. ALL SUPERPAVE MIXTURES SHALL BE PRODUCED USING ITEM 456. WARM MIX ASPHALT. A WARM MIX ASPHALT (WMA) TECHNOLOGY THAT IS ON THE NEAUPG QUALIFIED PRODUCTS LIST AND THAT COMPLIES WITH MASSDOT WMA SPECIAL PROVISIONS.
- 3. ASPHALT EMULSION FOR TACK COAT SHALL BE SPRAY APPLIED FOR DOUBLE OVERLAP COVERAGE (RS-1) AT 0.07 GAL/SY OVER MICRO-MILLED SURFACES AND 0.05 GAL/SY OVER SMOOTH SURFACES PRIOR TO PAVING.
- 4. EXISTING SUBBASE MATERIAL MEETING MATERIAL SPECIFICATION M1.03.0 GRAVEL BORROW, TYPE B SHALL BE RETAINED. EXISTING SUBBASE NOT CONFORMING TO THE MATERIAL SPECIFICATION M1.03.0 GRAVEL BORROW, TYPE B SHALL BE REMOVED TO THE REQUIRED DEPTH AND REPLACED WITH GRAVEL BORROW, TYPE B.
- 5. ALL HOT MIX ASPHALT DRIVEWAYS SHALL BE ESTIMATED AND PAID FOR UNDER ITEM 703 OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE.
- 6. TEMPORARY CONSTRUCTION SHALL USE SUPERPAVE HOT MIX ASPHALT MIXTURES AND MAY NOT BE SUBJECT TO THE SAME SAMPLING AND TESTING REQUIRED FOR PERMANENT CONSTRUCTION



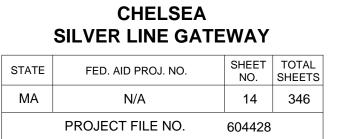
# 30' BUSWAY SECTION ADJACENT TO ACTIVE RAILROAD

STA 25+20 TO STA 29+80

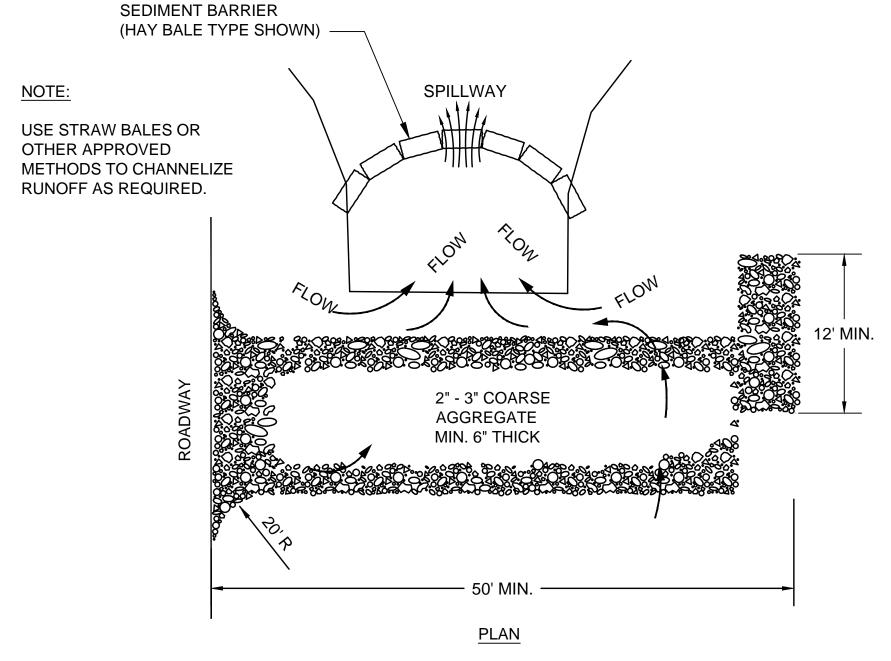


30' BUSWAY SECTION ADJACENT TO ACTIVE RAILROAD

STA 32+53 TO STA 35+35



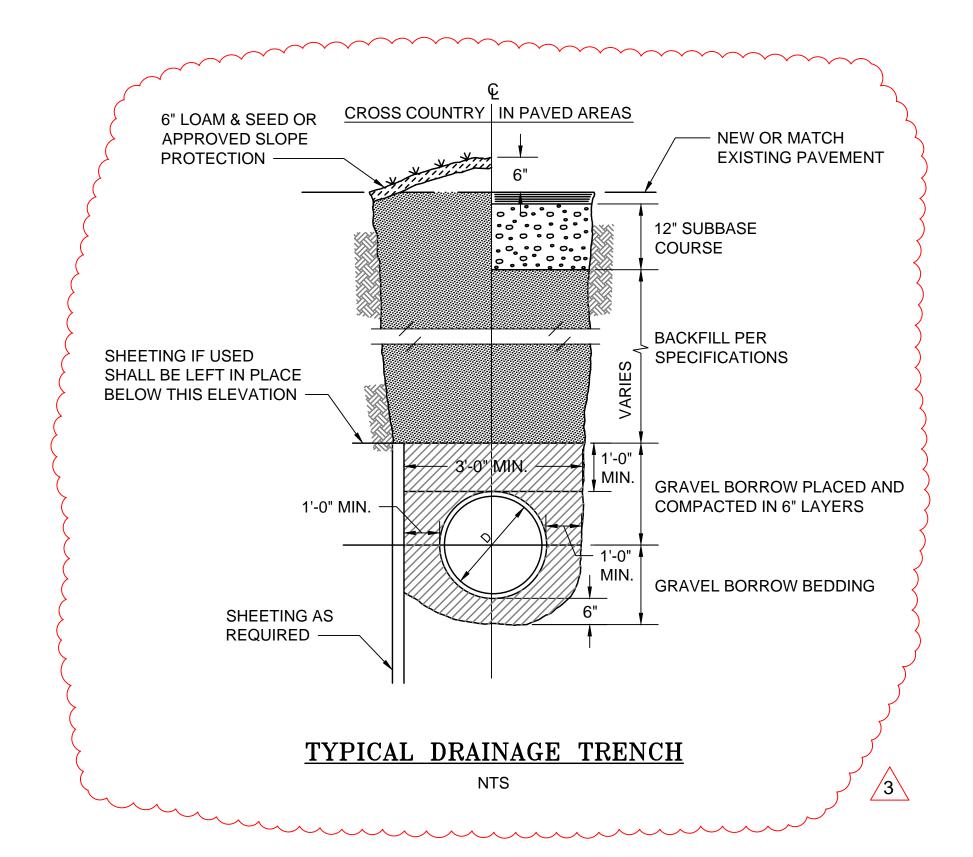
**CONSTRUCTION DETAILS** 



NOTE:

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT OUT OF THE CONSTRUCTION AREA. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

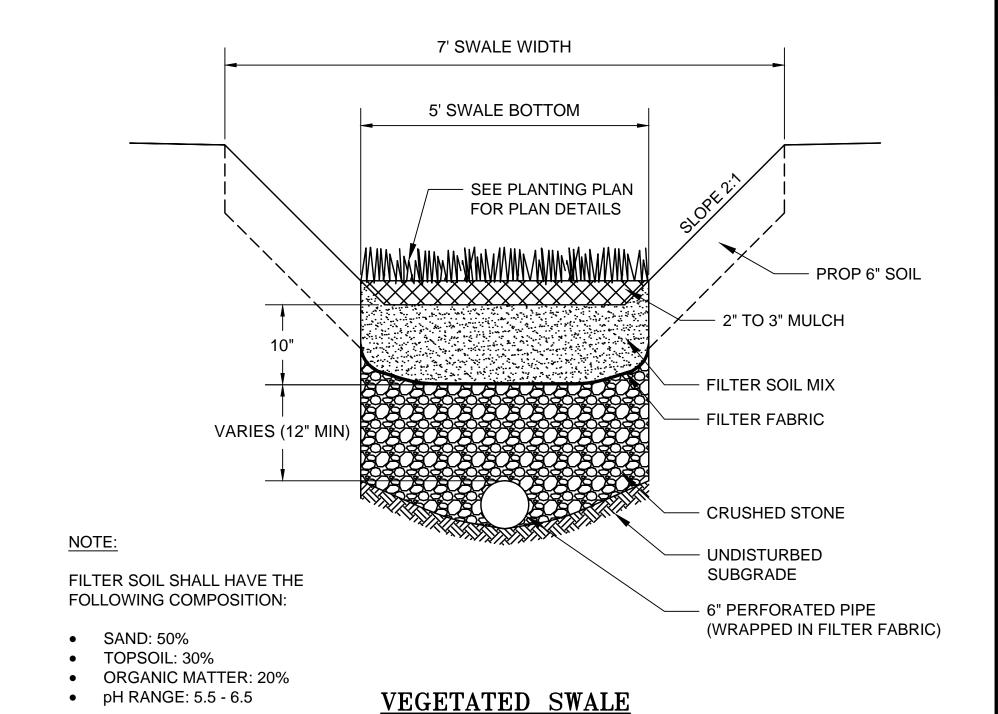
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

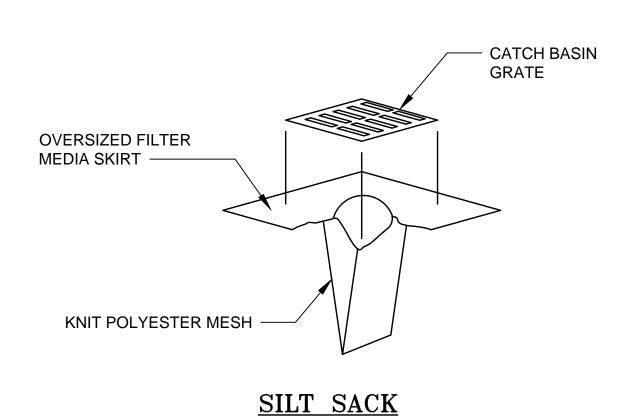


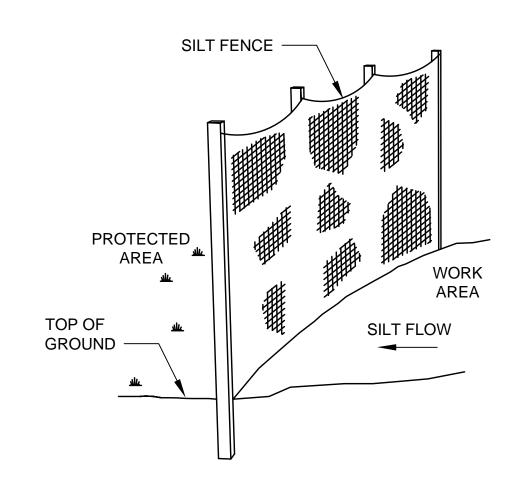
— VARIES (SEE PLANS) -CAP ROCK — - PROP CURB 2' DEPTH 3/16"/FT PROP DUMPED RIP-RAP (M2.02.2) GEOTEXTILE FABRIC — - 4" PAVEMENT MILLING MULCH MEET EXIST GRADE —— - PROP 12" CRUSHED STONE NOTE: RIP-RAP SLOPE SHALL BE INSTALLED IN COMPACTED CRUSHED STONE ACCORDANCE WITH MASSDOT DRAWING - FIRM SUITABLE SUBBASE 2.4.1 OF THE BRIDGE MANUAL STANDARD SPECIFICATIONS ITEM 983. AND MATERIALS FOLD BACK GEOTEXTILE SHALL MEET THE REQUIREMENTS AS FABRIC 3'-0" SPECIFIED IN SUBSECTION M2.02.2.

RIP-RAP SLOPE DETAIL

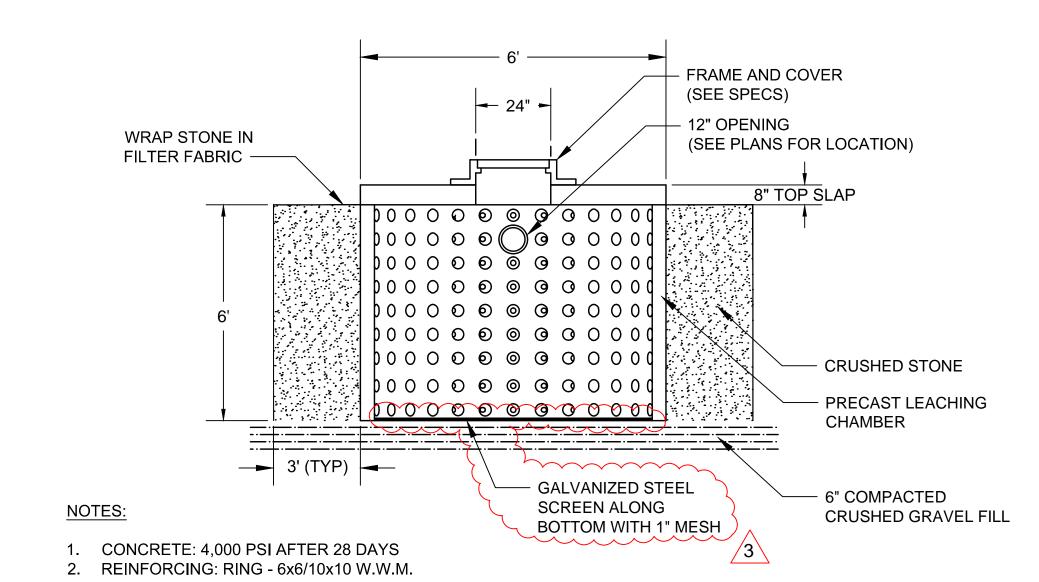
NTS







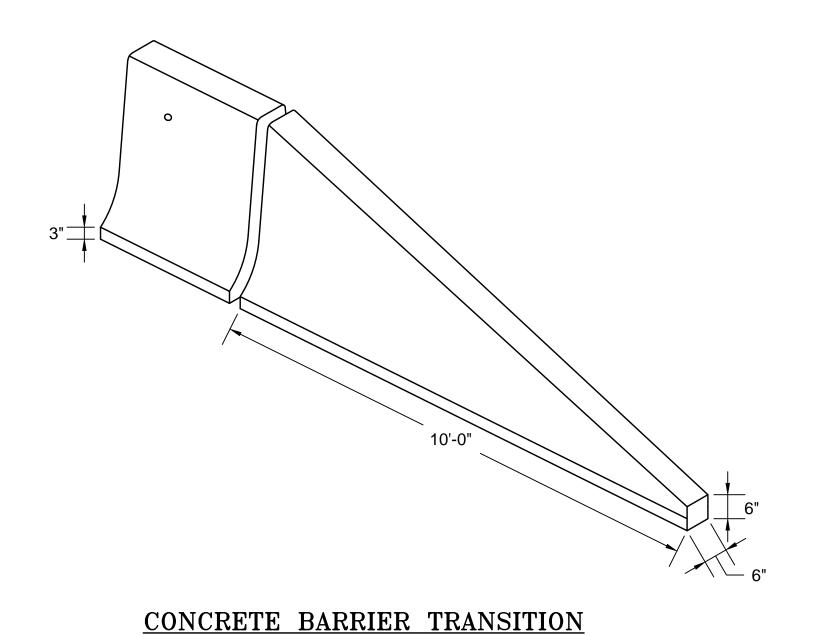
SILT FENCE





ГАТЕ	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	15	346
	PROJECT FILE NO.	604428	

**CONSTRUCTION DETAILS** 



FINISHED GROUND

#4 @ 12" EACH WAY

#4 @ 12" EACH WAY

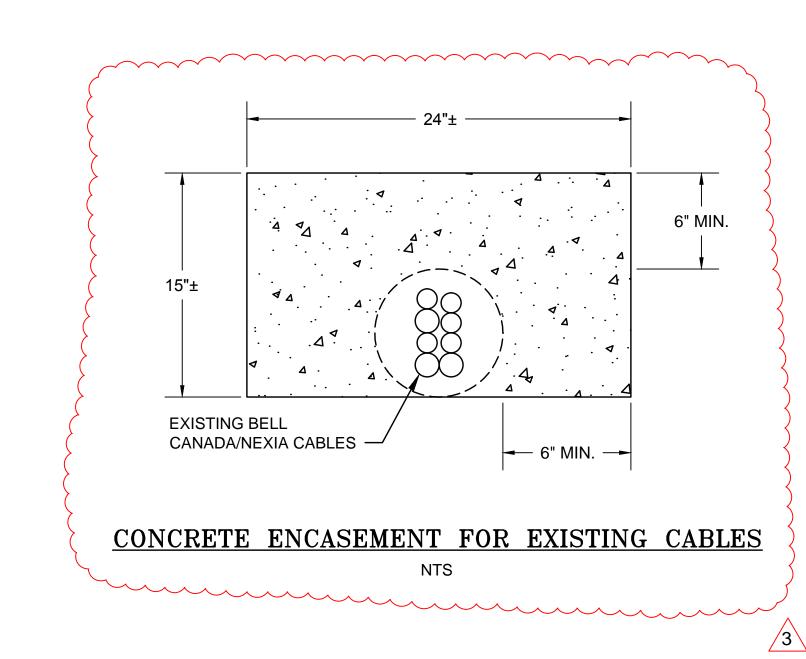
12"

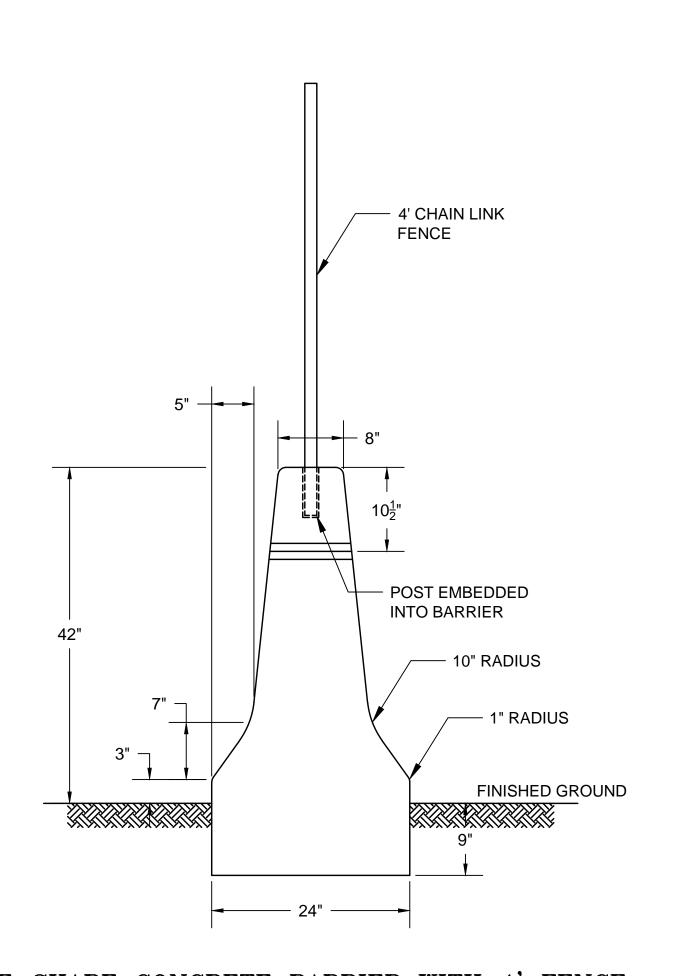
LOW RETAINING WALL

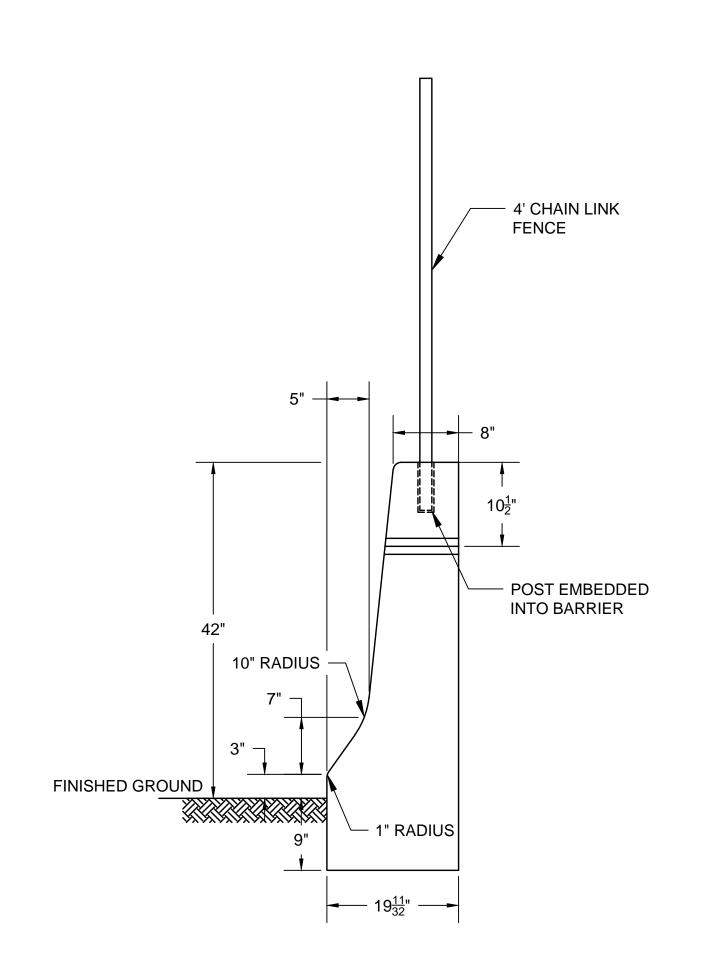
STA 31+40 TO 34+60

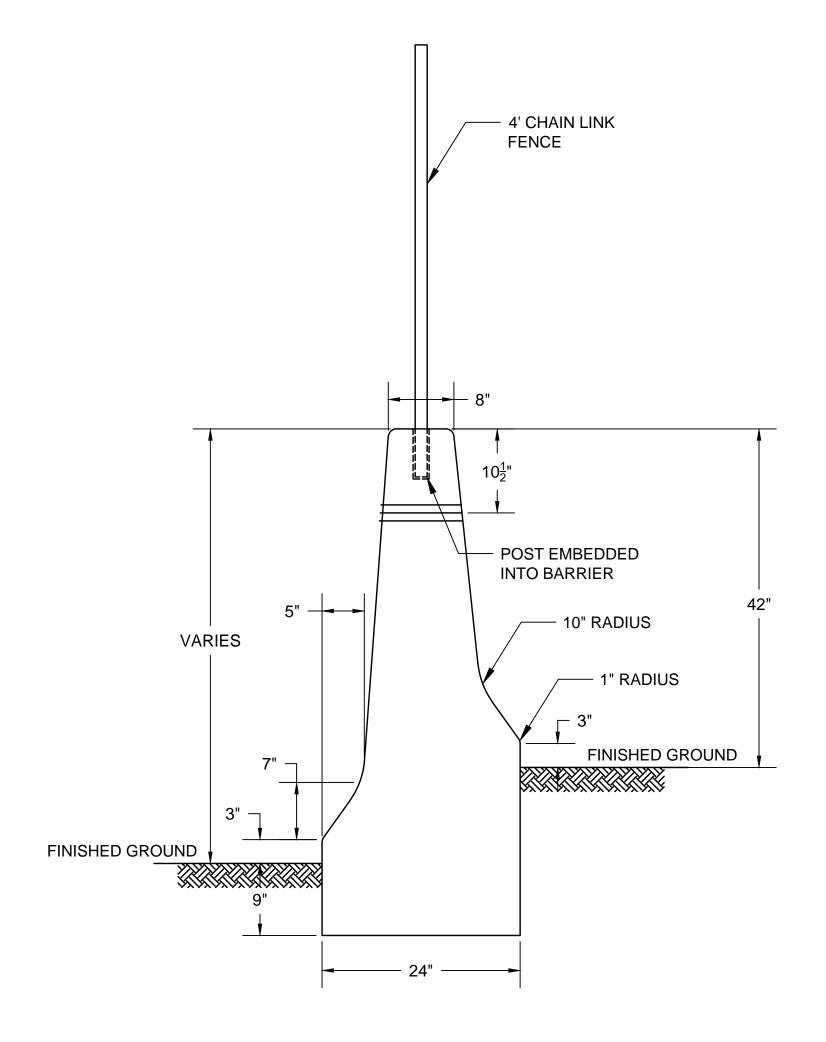
STA 66+59 TO 67+27

NTS









F-SHAPE SINGLE FACED CONCRETE BARRIER WITH 4' FENCE

F-SHAPE ASYMMETRICAL CONCRETE BARRIER WITH 4' FENCE

NTS

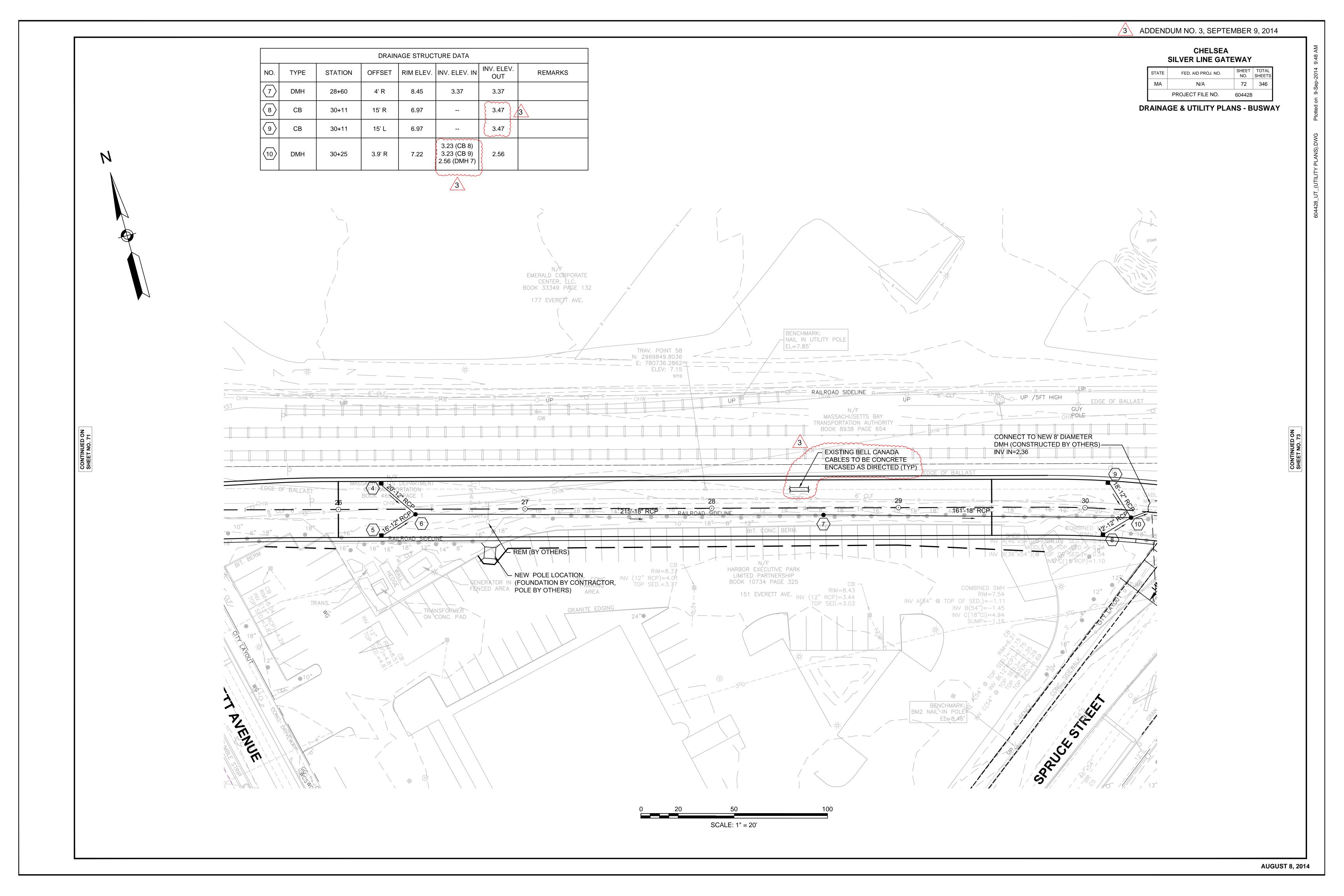
**AUGUST 8, 2014** 

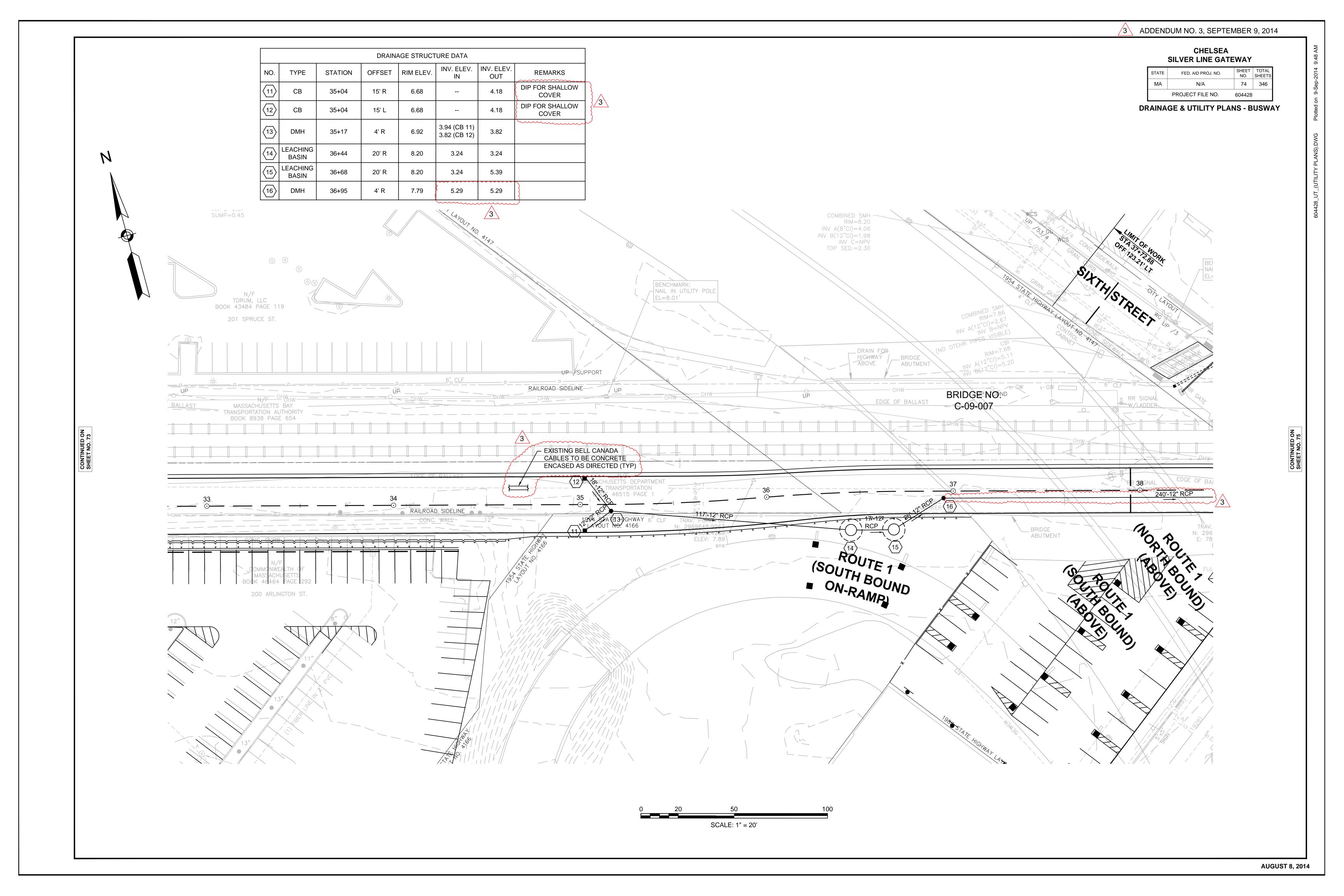
**AUGUST 8, 2014** 

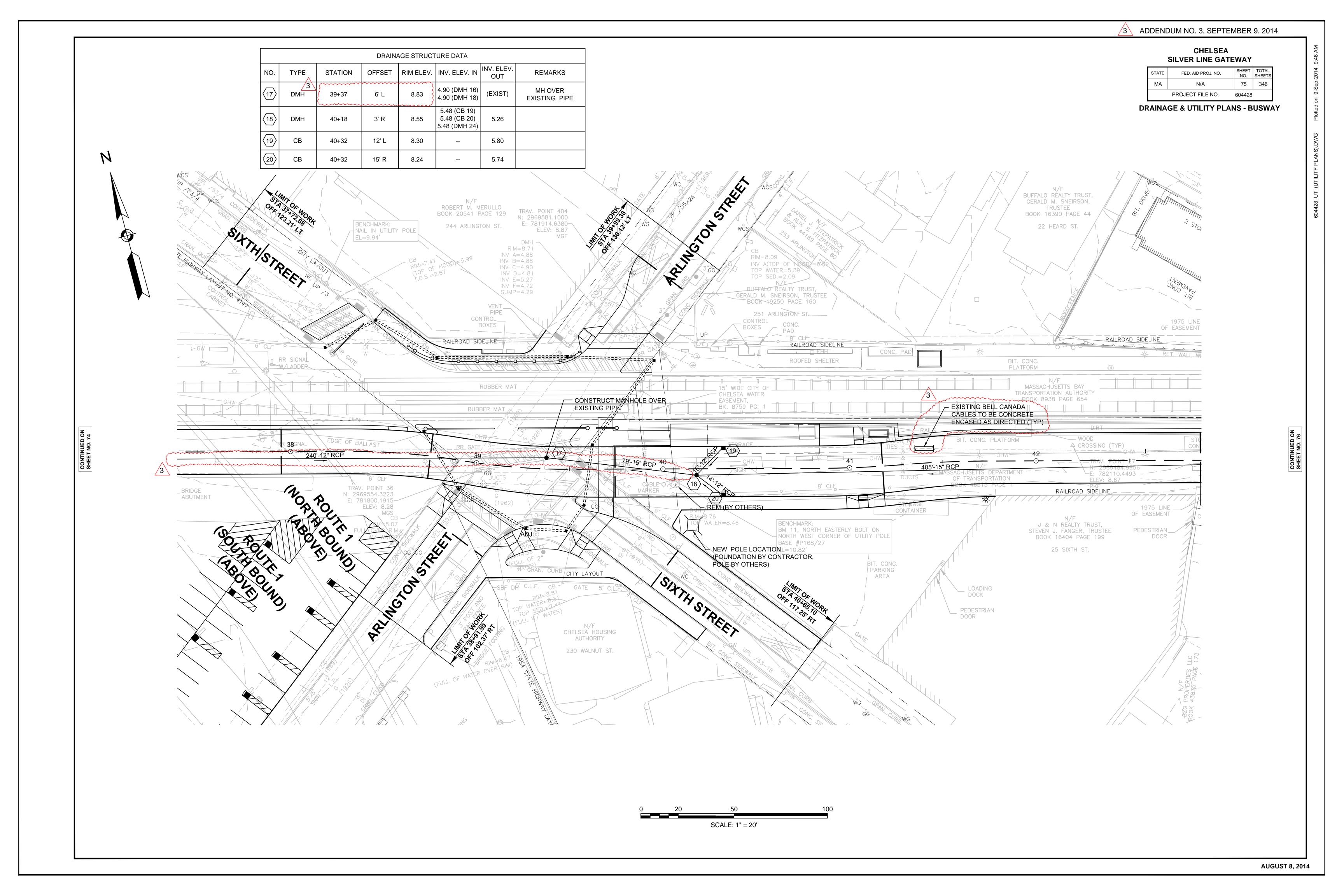
**AUGUST 8, 2014** 

FOR CONSTRUCTION PROFILES, SEE SHEETS NO. 47 AND 48

**JULY 19, 2014** 







STATE

# <u>PLANS</u>

PROPOSED LIGHT POLE WITH ONE LUMINAIRE

PROPOSED WALL MOUNTED

PROPOSED ELECTRICAL HANDHOLE (1'-0" x 2'-0") UNLESS OTHERWISE NOTED

PROPOSED ELECTRICAL HANDHOLE(3'-0" x 4'-0")UNLESS OTHERWISE NOTED

PROPOSED ELECTRICAL LOAD CENTER

PROPOSED CONCRETE ENCASED DUCTBANK ELECTRICAL CONDUIT TYPE NM - UNLESS OTHERWISE NOTED

———— PROPOSED DIRECT BURIED ELECTRICAL CONDUIT TYPE NM

ILLUMINATED LOLLIPOP "T" SIGN

SECURITY CAMERA (REFER TO COMMUNICATIONS DRAWINGS FOR FURTHER DETAILS)

# **ABBREVIATIONS**

XST

NEMA TYPE

1 (3R\*\*) 4 (4X

**EXISTING** 

APPROX.	APPROXIMATELY
COMM	COMMUNICATIONS
EHH	ELECTRICAL HAND HOLE
EL	ELEVATION
ETHER	ETHERNET
FOC	FIBER OPTIC CABLE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
G	GROUND
LTG	LIGHTING
MIN	MINIMUM
MTD	MOUNTED
PROP	PROPOSED
SEC	SECURITY
TYP	TYPICAL
W	DENOTES WATERTIGHT EQUIPMENT

DENOTES WEATHERPROOF EQUIPMENT

INAIRE	RE CIRCUIT EQUIPMENT ENCLOSURE SC	
NUMBER	NUMBER	
QT/	ATION	
317	ATION	
TYPE	ANSI/IES	
ITPE	DISTRIBUTION ** LUMINAIRES - WET LOCATION LISTED	
MOUNTING	NTING LUMINAIRE	
HEIGHT	WATTAGE	

# GENERAL NOTES

- 1. CONDUIT INSTALLATIONS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT, EXISTING CONDITIONS AND STRUCTURAL CONDITIONS.
- 2. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT MODIFICATIONS ACCEPTABLE TO THE OWNER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- 3. ITEMS SHALL BE PROVIDED WITH NEMA ENCLOSURE AS INDICATED ON DRAWINGS AND IN THE SPECIFICATIONS.
- 4. THE PROPOSED LIGHTING LOAD CENTERS SHALL BE PLACED ON NEW FOUNDATION IN COORDINATION WITH THE NSTAR ELECTRIC, MBTA, THE CITY OF CHELSEA, THE ENGINEER AND ANY OTHER INVOLVED ENTITY.
- LOCATIONS OF LIGHT POLES ARE EXACT, HANDHOLES, CONDUITS, JUNCTION BOXES ARE APPROXIMATE ONLY AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER TO SUIT CONDITIONS.
- LUMINAIRE HEIGHT SHALL BE FROM THE TOP OF THE FOUNDATION.
- 7. THE CONTRACTOR SHALL NOTIFY DIG SAFE PRIOR TO CONSTRUCTION.
- 8. ALL CONDUIT BURIED UNDER GROUND SHALL BE 3" NM PVC UNLESS OTHERWISE INDICATED.
- ALL LUMINAIRE POLE ANCHOR BOLT SIZES, NUMBER, LENGTH AND BOLT CIRCLE SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- 10. ALL WIRING SHALL BE IN ACCORDANCE WITH SECTION 813.20 AND THE SPECIAL PROVISIONS.
- 11. ALUMINUM WIRING SHALL NOT BE USED.
- 12. GROUNDING CONDUCTORS SHALL BE CONTINUOUS.
- 13. MATERIALS AND EQUIPMENT SHALL BE LISTED BY THE UNDERWRITER LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.
- 14. INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 15. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.
- 16. CONTRACTOR SHALL CONTACT NSTAR ELECTRIC PRIOR TO ANY STREET LIGHTING AND SIGNAL DISCONNECTIONS,
- 17. THE BUS RAPID TRANSIT ROUTE IS BASED ON THE MBTA LIGHTING LEVELS REQUIREMENTS OF 4.0 FC. THE SUP (SHARED USE PATH) LIGHTING LEVELS REQUIREMENTS ARE 1.0 FC PER THE IESNA DATED 6/27/00.
- 18. OTHER MANUFACTURER'S PRODUCTS MAY BE SUBSTITUTED FOR THE ROADWAY AND SUP LUMINAIRES IF THE INSTALLED LUMINAIRE LIGHT UTILIZATION AND MINIMUM FC FOR THE BUS RAPID TRANSIT ROUTE AND THE SUP (SHARED USE PATH) ARE AS LEAST AS GREAT AS THAT INDICATED IN GENERAL NOTES.

# NOTES:

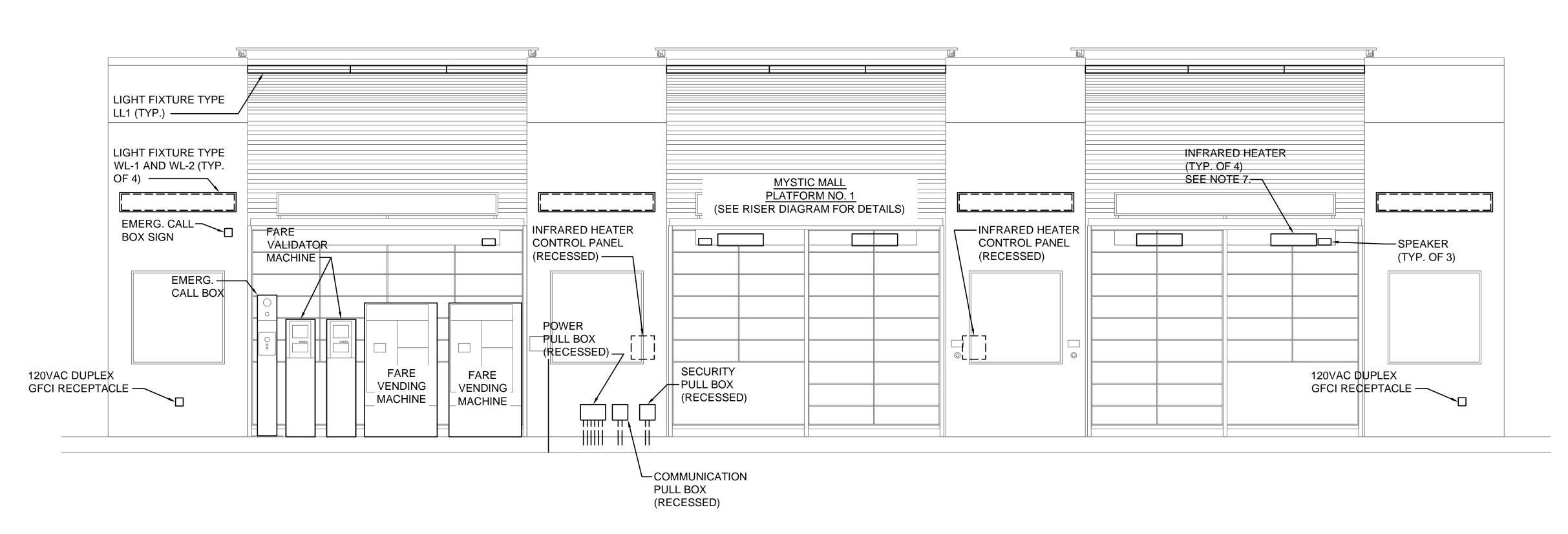
- 1. CONDUITS SHALL BE CONCEALED IN THE CONCRETE SLAB, WALLS AND CEILINGS AND CEILING CAVITIES WHERE POSSIBLE.
- 2. PROVIDE FLUSH MOUNTED JUNCTION BOXES FOR EACH LIGHT FIXTURE, HEATER, EMERGENGY CALL BOX, VMS SIGN, SECURITY CAMERAS, ETC., ADDITIONAL BOXES SHALL BE INSTALLED TO ACCOMMODATE ADDITIONAL BENDS NOT INDICATED, COORDINATE WITH OTHER DISCIPLINES FOR EXACT LOCATION AND NUMBER OF DEVICES. JUNCTION BOXES SHALL BE SIZED TO ACCOMMODATE THE CONDUIT AND CONDUCTOR SIZES PER THE N.E.C. ALL BOXES ARE TO HAVE STAINLESS STEEL COVERS AND TAMPERPROOF SCREWS.
- CONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES TO ENSURE THAT THE CONCRETE ENCASED CONDUITS AND FLUSH MOUNTED JUNCTION BOXES/PULL BOXES INSTALLED DO NOT INTERFERE WITH ANY STRUCTURAL REINFORCING BARS OR OTHER STRUCTURAL MEMBERS.
- 4. PLATFORM PLAN AND ELEVATION SHOWN ARE SIMILAR FOR ALL PLATFORMS.
- REFER TO SHEET NO. 109 FOR TYPICAL PLATFORM POWER, COMMUNICATION AND SECURITY RISER DIAGRAMS.
- 6. FOR ADDITIONAL INFORMATION ON THE PLATFORM LIGHTING, HEATER AND SPEAKER LOCATIONS SEE THE ARCHITECTURAL DRAWINGS.

ELECTRIC INFRARED HEATER (TYP)
3.2 KW, 240V/1PH/60CY
24" LONG X 15" WIDE X MAX 12" HEIGHT
30 DEGREE REFLECTIVE PATTERN
STAINLESS STEEL CONSTRUCTION
STAINLESS STEEL WIRE GUARD AND RECESSED MOUNTING
FRAME
RAYWALL MODEL 222-30-THSS-240V OR EQUAL BY CHROMALOX
OR PROTHERM

# NOTES:

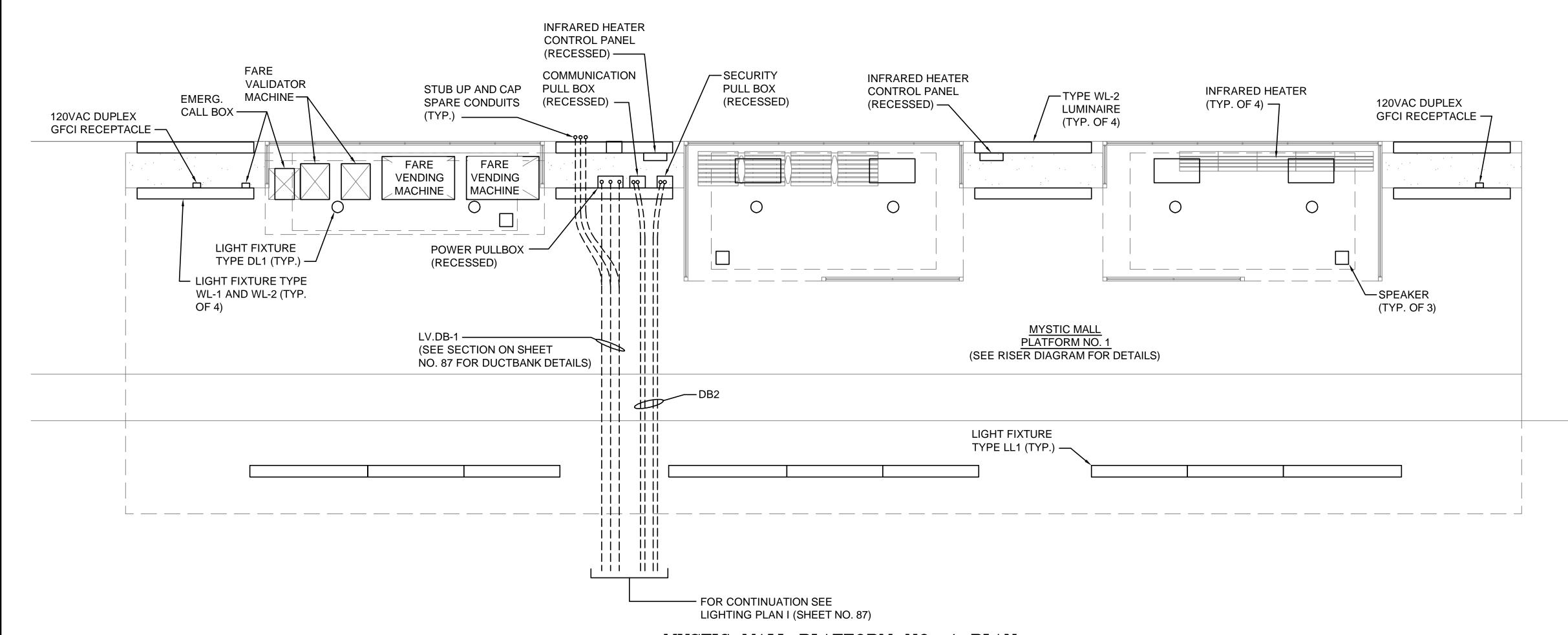
- FOR EACH BUS STOP HEATED ENCLOSURE, PROVIDE A LOCKABLE NEMA 1 OR NEMA 4 CONTROL PANEL WITH DISCONNECT SWITCH, CONTACTOR, FUSING, 24 VOLT CONTROL CIRCUIT, HEATER ON/OFF TIMER SWITCH, AND REMOTE PILOT LIGHT INDICATING HEATER ON. TIMER SWITCH SHALL BE 0 TO 10 MINUTES MINIMUM, 0 TO 20 MINUTES MAXIMUM RANGE. ALL HEATERS WITHIN ONE BUS STOP ENCLOSURE SHALL BE CONTROLLED BY ONE CONTROL PANEL. MOUNT EACH CONTROL PANEL INSIDE A LOCKED NEMA 4 METAL BOX LOCATED WHERE INDICATED INSIDE EACH BUS STOP HEATED ENCLOSURE. PROVIDE A REMOTE ADA VANDAL-RESISTANT "ON" BUTTON, AND A REMOTE ADA VANDAL-RESISTANT "OFF" BUTTON. BOTH BUTTONS SHALL BE CORROSION-RESISTANT METAL AND MINIMUM 2" DIAMETER. THE REMOTE "ON" BUTTON WILL BE PUSHED TO ENERGIZE THE HEATERS FOR THE SET TIME OF THE TIMER INSIDE THE CONTROL PANEL (SET BY THE INSTALLER). THE "OFF" BUTTON WILL BE PUSHED TO TURN OFF THE HEATERS IF NECESSARY BEFORE THE TIMER TURNS OFF THE HEATERS. THE REMOTE PILOT LIGHT MOUNTED IN THE FACE OF THE OUTER METAL PANEL SHALL BE CONNECTED TO THE HEATER MANUFACTURER'S CONTROL PANEL VIA A WIRING HARNESS. THE REMOTE "ON" AND "OFF" BUTTONS WILL BE CONNECTED TO THE HEATER MANUFACTURER'S CONTROL PANEL VIA FIELD WIRING AND CONDUIT.
- HEATER INSTALLATION REQUIREMENTS, MFR
  RECOMMENDED MINIMUM CLEARANCES AND HEAT
  PATTERN COVERAGE SHALL BE COMPATIBLE WITH BUS
  STOP HEATED ENCLOSURE LAYOUT.
- SUBMIT SHOP DRAWING FOR APPROVAL INDICATING PRODUCT DATA, INSTALLATION DETAILS INCLUDING MFR RECOMMENDED MINIMUM CLEARANCES, PLACEMENT IN BUS STOP HEATED ENCLOSURE, AND HEAT PATTERN COVERAGE IN PLAN AND SECTION.

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# MYSTIC MALL PLATFORM NO. 1 ELEVATION

(SIMILAR FOR MYSTIC MALL PLATFORM NO. 2, CHELSEA CENTER, EASTERN AVENUE PLATFORMS) N.T.S.



# MYSTIC MALL PLATFORM NO. 1 PLAN

(SIMILAR FOR MYSTIC MALL PLATFORM NO. 2, CHELSEA CENTER, EASTERN AVENUE PLATFORMS)
N.T.S.

